CLAIMS

What is claimed is:

1. A framework for synchronizing one or more replicas in a sync community, the framework comprising:

a sync runtime module that provides services to one or more sync adapters, wherein the services provided by the sync runtime module to each of the one or more sync adapters include change enumeration; and

a sync controller that instantiates a particular sync adapter such that the particular sync adapter can use the services to synchronize a first replica in the sync community with a second replica.

2. A framework as defined in claim 1, wherein the services provided by sync runtime module are accessed by the one or more sync adapters using an applications programming interface.

3. A framework as defined in claim 1, wherein the services further comprises a change enumeration service that compares a knowledge of the first replica with a knowledge of the second replica to enumerate changes.

4. A framework as defined in claim 3, wherein the services further comprises a conflict detection service that uses the knowledge of the first replica and the knowledge of the second replica to detect conflicts.

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5. A framework as defined in claim 4, wherein the conflict detection service detects a conflict when a change enumerated by the first replica is not in the knowledge of the second replica and a change enumerated by the second replica is not in the knowledge of the first replica.

6. A framework as defined in claim 4, wherein the conflict detection service further comprises a conflict resolution module.

7. A framework as defined in claim 6, wherein the conflict resolution module can implement a conflict policy identified in a profile or included in a pluggable conflict resolution module.

8. A framework as defined in claim 1, further comprising a profile that includes one or more parameters, wherein the sync controller configures the particular sync adapter using the one or more parameters in the profile.

9. A framework as defined in claim 8, wherein the profile identifies one or more of:

a source folder of the first replica;

a destination folder of the first replica;

a source folder of the second replica;

a destination folder of the second replica;

a first filter to filter the changes that are enumerated at the first replica;

a second filter to filter the changes retrieved from the second replica;

a transformation for converting an item from the second replica to a format of the first replica; and

a conflict resolution policy.

10. A framework as defined in claim 1, wherein the services further comprises one or more of:

an item ID matching service, wherein item IDs of the second replica are provided by the particular adapter during a receive sync and item IDs of the first replica are provided by the sync runtime module during a send sync;

a sync interruptability service that includes exceptions in a remote knowledge; and

a service that prevents changes from reflecting to and from the first replica.

11. A framework as defined in claim 1, wherein the services further comprises a sync metadata management service that stores a remote knowledge for the particular adapter.

12. A framework as defined in claim 11, wherein the sync metadata management service stores a local knowledge used by the particular adapter.

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13.   A method for synchronizing a replica with one or more back end replicas, the method comprising:

initiating a particular adapter using one or more parameters included in a sync profile, wherein the particular adapter uses the one or more parameters to synchronize a first replica with a second replica;

receiving a request from the particular adapter to enumerate changes on the first replica by comparing a knowledge of the first replica with a knowledge of the second replica; and

detecting conflicts by determining whether a change enumerated by the first replica is included in the knowledge of the second replica and whether the change at the second replica is included in the knowledge of the first replica.

14.   A method as defined in claim 13, wherein initiating a particular adapter using one or more parameters included in a sync profile further comprises defining the sync profile.

15.   A method as defined in claim 14, wherein defining the sync profile further comprises one or more of:

specifying a sync direction;

identifying a particular adapter;

identifying a source folder and a destination folder on the first replica;

identifying a source folder and a destination folder on the second replica; and

including a conflict policy.

16.   A method as defined in claim 13, wherein receiving a request from the particular adapter to enumerate changes on the first replica by comparing a knowledge of the first replica with a knowledge of the second replica further comprises receiving a request for a service provided by a sync runtime.

17.   A method as defined in claim 16, wherein receiving a request for a service provided by a sync runtime further comprises providing the requested service.

18.   A method as defined in claim 17, wherein providing the requested service further comprises managing sync metadata by performing one or more of:

        storing a state of the synchronization for the particular adapter;

        storing local knowledge for the second replica; and

        storing a remote knowledge of the second replica.

19.   A method as defined in claim 17, wherein providing the requested service further comprises mapping an item ID of the first replica with an item ID of the second replica, wherein the particular adapter provides the item ID of the second replica in a receive sync and wherein the sync runtime provides the item ID of the second replica during a send sync.

20.   A method as defined in claim 17, wherein providing the requested service further comprises including exceptions in a remote knowledge such that items corresponding to the exceptions are not synchronized in future synchronizations.

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21. A method as defined in claim 13, further comprising preventing a change from being reflected between the first replica and the second replica using the knowledge of the first replica and the knowledge of the second replica.

22. A method as defined in claim 13, further comprising:

sending changes enumerated at the first replica to the second replica;

receiving changes enumerated by the second replica;

applying changes enumerated by the second replica at the first replica; and

updating the knowledge of the first replica.

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23.   A computer program product for implementing a method for synchronizing a replica with one or more back end replicas, the computer program product comprising:

a computer-readable medium having computer executable instructions for performing the method, the method comprising:

initiating a particular adapter using one or more parameters included in a sync profile, wherein the particular adapter uses the one or more parameters to synchronize a first replica with a second replica;

receiving a request from the particular adapter to enumerate changes on the first replica by comparing a knowledge of the first replica with a knowledge of the second replica; and

detecting conflicts by determining whether a change enumerated by the first replica is included in the knowledge of the second replica and whether the change at the second replica is included in the knowledge of the first replica.

24.   A computer program product as defined in claim 23, wherein initiating a particular adapter using one or more parameters included in a sync profile further comprises defining the sync profile.

25.   A computer program product as defined in claim 24, wherein defining the sync profile further comprises one or more of:

specifying a sync direction;

identifying a particular adapter;

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identifying a source folder and a destination folder on the first replica;

identifying a source folder and a destination folder on the second replica;

and

including a conflict policy.

26.   A computer program product as defined in claim 23, wherein receiving a request from the particular adapter to enumerate changes on the first replica by comparing a knowledge of the first replica with a knowledge of the second replica further comprises receiving a request for a service provided by a sync runtime.

27.   A computer program product as defined in claim 26, wherein receiving a request for a service provided by a sync runtime further comprises providing the requested service.

28.   A computer program product as defined in claim 27, wherein providing the requested service further comprises managing sync metadata by performing one or more of:

storing a state of the synchronization for the particular adapter;

storing local knowledge for the second replica; and

storing a remote knowledge of the second replica.

29.   A computer program product as defined in claim 27, wherein providing the requested service further comprises mapping an item ID of the first replica with an item ID of the second replica, wherein the particular adapter provides the item ID of the

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second replica in a receive sync and wherein the sync runtime provides the item ID of the second replica during a send sync.

30.   A computer program product as defined in claim 27, wherein providing the requested service further comprises including exceptions in a remote knowledge such that items corresponding to the exceptions are not synchronized in future synchronizations.

31.   A computer program product as defined in claim 23, further comprising preventing a change from being reflected between the first replica and the second replica using the knowledge of the first replica and the knowledge of the second replica.

32.   A computer program product as defined in claim 23, further comprising:

sending changes enumerated at the first replica to the second replica;

receiving changes enumerated by the second replica;

applying changes enumerated by the second replica at the first replica; and

updating the knowledge of the first replica.

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